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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/932,505

08/17/2001

Jeffrey Jay Jacobsen

3424P008D

6949

8791

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04/23/2003

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EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,505

Applicant(s)

JACOBSEN ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,23-27,43-52,55-62 and 67-74 is/are pending in the application.
- 4a) Of the above claim(s) 67-74 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,23-27,43-52 and 55-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendments to the claims filed on 01/17/2003 have been entered.

Response to Appeal Brief

2. In response to Applicant's Appeal Brief filed on 01/17/03, the finality of the office action mailed on 09/12/02 is hereby withdrawn and the prosecution is reopened.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The limitation of ***different shaped blocks*** being deposited onto one of the flexible substrate and any references in respect to the different shaped blocks. The specification discloses the display being different sizes as well as the receptor region being different sizes. Further, the specification also discloses that the substrate is capable of receiving various sizes of blocks. However, blocks that are deposited onto one of the substrate having different shapes are not shown in the specification or the figures.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1, 4-9, 23-27, 43-52 and 55-62 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The limitation of ***different shaped blocks*** being deposited onto one of the flexible substrate and any references in respect to the different shaped blocks. The specification discloses the display being different sizes as well as the receptor region being different sizes. Further, the specification also discloses that the substrate is capable of receiving various sizes of blocks. However, blocks that are deposited onto one of the substrate having different shapes are not disclosed in the specification or shown in the figures. The description of the blocks having various sizes does not necessarily mean that the blocks have different shapes.

For examination purposes the limitation "different shaped " was not given any patentable weight.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 1, 4-9, 23-27, 43-52 and 55-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Izu et al., (Izu), USPAT 4,514,583.**

7. The admitted prior art described in page 1 of the present application discloses that fabrication of a display panel is well known in the art and display panels may be comprised of active matrix or passive matrix panels wherein the active and passive matrix panels may be either transmissive or reflective.

The admitted prior art described in pages 3-5 and shown in Figures 1(a) – 1(d) of the present application further discloses that the display device comprising:

- a substrate (12)
 - an active or passive matrix display backplane ((10) coupled to the substrate;
- and
- the active or passive matrix display backplane comprises a plurality of blocks (14) that are deposited onto the substrate (12).

The admitted prior art described in page 2 of the present application also discloses that the reflective displays typically comprise *single crystal silicon* integrated substrates that have reflective pixels.

Only difference between the display device of the admitted prior art compared to the present invention is that the substrate is flexible and thus the display device is flexible.

Izu discloses a flexible substrate for the fabrication of thin film electronic devices (abstract). Izu also discloses that the use of thin, continuous, flexible substrate represents a mean of economizing conventional continuous processing technique and thus cost efficiency favors the continuous deposition of thin film electronic, metallic and semiconductor layers upon a continuous, flexible substrate (col. 2, lines 57-67).

Izu is evidence that ordinary workers in the art of liquid crystal would find a reason, suggestion or motivation to use a flexible substrate.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of the admitted prior art such as using a flexible substrate in the device of the admitted prior art so that the cost of manufacturing is reduced, as per the teachings of Izu.

Accordingly, claims 1, 23, 55 and 56 would have been obvious.

As to claims 4, 5, 24, 25, 46 and 57, since the modified display device is flexible, it would have been obvious to one of ordinary skill in the art that it will conform to a desired shape of an object which is either planar or non-planar when it is attached to the object.

As to claims 6, 26, 47 and 58, the admitted prior art described in page 3, lines 19-20 of the present application also discloses that each blocks may contain driver circuitry for driving a pixel electrode.

As to claims 7, 27, 48 and 59, coupling a display generation substrate to the active or passive matrix substrate is common and known in the art and would have been obvious to do to avail a proven technology.

As to claims 8 and 60, the admitted prior art described in page 3, lines 11-13 of the present application discloses that the backplane comprises electrodes.

As to claims 9 and 61, it is clear from the figures shown in the admitted prior art of the present application that the active/passive matrix display is conformal.

As to claim 62, the admitted prior art shown in Figures 1(a) – 1(d) of the present application clearly shows that the substrate has at least one recessed region wherein reflective blocks are deposited thus making the recessed region reflective.

As to claim 43, forming plurality of display devices on a substrate is common and known in the art and thus would have been obvious to obtain a large display using plurality of displays.

As to claim 44, assembling each of the display components into a separate display device is common and known in the art and to avail a proven technology would have been obvious to do.

As to claim 45, the admitted prior art shown in Figures 1(a) – 1(d) of the present application clearly shows that the display device components has a backplane comprising a plurality of shaped blocks which are deposited onto the substrate.

As to claim 49, the admitted prior art described in page 3, lines 11-13 of the present application discloses that the backplane comprises electrodes.

As to claims 50 and 51, the admitted prior art described in page 1 of the present application discloses that the display panels may be comprised of active matrix or passive matrix panels.

As to claim 52, the admitted prior art shown in Figures 1(a)-1(d) clearly shows that the second length of the substrate is continuous.

Response to Arguments

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) USPAT 4,191,800 is related to a device that employs flexible substrates.

b) USPAT's 6,316,278; 6,468,638, 6,281,038 and US 2001/0031514 assigned to the same assignee are related to method of forming microstructures using self-assembly.

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

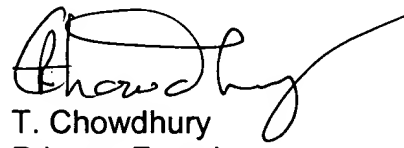
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (703) 308-4115. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L Sikes can be reached on (703) 305-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7005 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



T. Chowdhury
Primary Examiner
Technology Center 2800

TRC
April 18, 2003